

## REMARKS

Applicants respectfully request reconsideration of the present application in view of the reasons below.

### **I. Amendments and Status of the Claims**

Claims 1-11 are amended. Exemplary support for the amendments to claim 1 can be found on page 6, lines 13-15. The remaining claims are amended to comport with U.S. claiming conventions and to correct minor typographical errors. No new matter is added.

Claims 1-15 are pending, and claims 12-15 are withdrawn. Thus, claim 1-11 are pending and subject to examination on the merits.

### **II. Claim Rejections Under 35 U.S.C §§ 102/103**

Claims 1-11 stand rejected for alleged anticipation by or obviousness over van Lengerich, U.S. Patent No. 6,500,463. The Examiner alleges that the '463 patent discloses encapsulation of microorganisms "by the combination of a protein and a carbohydrate by mixing a water dispersible probiotic microorganism in an aqueous suspension of a protein and a carbohydrate." (Final Office Action at page 5, lines 13-15.)

The '463 patent is ineffective as a reference in this regard because it does not suggest a probiotic "encapsulated in a protective encapsulant to prolong the storage life of the probiotic, wherein the encapsulant is formed by the combination of a *film forming* protein and a carbohydrate," as recited.

The claimed invention ensures that the encapsulating mixture of "a protein and a carbohydrate" is formed about individual particles of the probiotic materials through use of one of (a)-(c). The '463 patent does not teach or suggest any of these steps. Rather, the '463 patent simply blends a material, such as a probiotic, into a dough-like carbohydrate mixture, in a manner shown in the examples. Nothing of this even hints at using film-forming proteins in combination with carbohydrate, as the present claims prescribe.

The Examiner cites column 6, line 50, for teaching that "[t]he material is a film forming substance." (Final Office Action at p. 5.) This portion of the '463 patent does not refer to the encapsulant material, however, but rather another material that "delay[s] or prevent[s] the access of

light, oxygen, and/or water to the matrix.” This additional “film-building substance” is only applied to the encapsulated material *after* it has been “admixed with the plasticizable matrix,” extruded,” and “formed into pieces or pellets” (col. 6, ll. 39-47). Thus, the “film-building substance” is not mixed with a carbohydrate, as required by the claims. The “film-building substance” is applied to the already dried “extruded pellets or pieces.”

The Examiner notes that “[w]hey protein ... is disclosed” at col. 13, line 57, or the ‘463 patent. This is technically correct, but the ‘463 patent discloses whey protein not as an encapsulant but rather, with a litany of other components, as a possible “additional component[]” that is used “to improve sensory attributes” of the composition. (‘463 patent at col. 13, ll. 63-66.) The ‘463 patent, therefore, does not suggest the use of whey protein as an encapsulant.

The Advisory Action states that the ‘463 patent “clearly teach[es] that whey protein can be used to facilitate processing as an alternative to improvement of sensory attributes.” The ‘463 patent, however, makes clear that the whey protein is not for use as part of the encapsulant, but for an entirely different purpose, “to improve sensory attributes.” Notably, the ‘463 patent makes no suggestion to combine whey protein with a carbohydrate. Thus, the ‘463 patent does not disclose the use of whey protein, as recited by the claims.

The Advisory Action states that the ‘463 patent “does teach pectin as an additional component of the encapsulant mixture.” The ‘463 patent, however, contains no suggestion that whey protein should be combined with pectin. Both pectin and whey protein are simply disclosed as being two of many possible “[a]dditional components.” (‘463 patent at col. 13, ll 39.) Nothing in the ‘463 patent suggests that these components should be combined to form an encapsulating composition. Thus, the ‘462 patent does not teach or suggest the claimed invention.

For at least these reasons, Applicants respectfully request reconsideration and withdrawal of this ground of rejection.

### CONCLUSION

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.


The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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